



31/8/88

Transmittal Note

SUPPLEMENT TO ANNEX 3 (TENTH EDITION)

METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION

1. The attached Supplement supersedes all previous Supplements to Annex 3 and includes differences notified by Contracting States up to 31 August 1988.
  2. This Supplement should be inserted at the end of Annex 3, Tenth Edition. Additional differences and revised comments received from Contracting States will be issued at intervals as amendments to this Supplement.
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SUPPLEMENT TO ANNEX 3 (TENTH EDITION)

METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION

Differences between the national regulations and practices of States and the corresponding International Standards and Recommended Practices contained in Annex 3, as notified to ICAO in accordance with Article 38 of the Convention on International Civil Aviation and the Council's resolution of 21 November 1950.

August 1988

INTERNATIONAL CIVIL AVIATION ORGANIZATION

RECORD OF AMENDMENTS TO SUPPLEMENT

No.	Date	Entered by	No.	Date	Entered by

AMENDMENTS TO ANNEX 3 ADOPTED OR APPROVED BY THE COUNCIL  
SUBSEQUENT TO PUBLICATION OF THE TENTH EDITION ISSUED IN JULY 1986

No.	Date of adoption or approval	Date applicable	No.	Date of adoption or approval	Date applicable
67	27/3/87	19/11/87			

1. Contracting States which have notified ICAO of differences

The Contracting States listed below have notified ICAO of differences which exist between their national regulations and practices and the International Standards and Recommended Practices of Annex 3, Tenth Edition, or have commented on their implementation as indicated herein:

State	Date of notification	Pages in Supplement	Date of publication
Argentina	20/11/87	1	31/8/88
Australia	23/12/87	1	31/8/88
Bangladesh	28/10/87	1	31/8/88
Barbados	29/7/87	1	31/8/88
Canada	23/10/87	1-2	31/8/88
Democratic People's Republic of Korea	7/3/88	1	31/8/88
Denmark	2/10/87	1	31/8/88
Finland	30/6/87	1	31/8/88
France	4/12/87	1	31/8/88
Germany, Federal Republic of	5/1/88	1	31/8/88
Madagascar	14/9/87	1	31/8/88
Malaysia	6/8/87	1	31/8/88
New Zealand	24/9/87	1-2	31/8/88
Norway	14/10/87	1	31/8/88
Papua New Guinea	3/6/87	1	31/8/88
Saudi Arabia	4/10/87	1	31/8/88
Sweden	8/12/87	1	31/8/88
Trinidad and Tobago	1/6/87	1	31/8/88
Union of Soviet Socialist Republics	4/1/88	1	31/8/88
United Arab Emirates	30/6/88	1	31/8/88
United Kingdom	3/8/87	1	31/8/88
United States	7/10/87	1-2	31/8/88
Vanuatu	6/8/87	1	31/8/88
Zambia	9/11/87	1	31/8/88

2. Contracting States which have notified ICAO that no differences exist

<u>State</u>	<u>Date of notification</u>	<u>State</u>	<u>Date of notification</u>
Austria	28/8/87	Morocco	4/1/88
Bahrain	11/5/87	Netherlands, Kingdom of the	7/7/87
Brazil	4/9/87	Peru	27/5/87
Brunei Darussalam	22/4/87	Portugal	19/10/87
Burkina Faso	2/6/87	Republic of Korea	30/9/87
Cyprus	30/6/87	Singapore	23/6/87
Egypt	26/9/87	Sri Lanka	2/10/87
Guinea-Bissau	31/5/87	Switzerland	2/10/87
Guyana	5/10/87	United Republic of Tanzania	----
Honduras	5/6/87	Uruguay	3/8/87
Hungary	10/11/87	Yugoslavia	7/10/87
Iran, Islamic Republic of	11/8/87	Zimbabwe	17/6/87
Ireland	16/9/87		

3. Contracting States from which no information has been received

Afghanistan	Greece	Niger
Algeria	Grenada	Nigeria
Angola	Guatemala	Oman
Antigua and Barbuda	Guinea	Pakistan
Bahamas	Haiti	Panama
Belgium	Iceland	Paraguay
Benin	India	Philippines
Bolivia	Indonesia	Poland
Botswana	Iraq	Qatar
Bulgaria	Israel	Romania
Burma	Italy	Rwanda
Burundi	Jamaica	Saint Lucia
Cameroon	Japan	Saint Vincent and the Grenadines
Cape Verde	Jordan	San Marino
Central African Republic	Kenya	Sao Tome and Principe
Chad	Kiribati	Senegal
Chile	Kuwait	Seychelles
China	Lao People's Democratic Republic	Sierra Leone
Colombia	Lebanon	Solomon Islands
Comoros	Lesotho	Somalia
Congo	Liberia	South Africa
Cook Islands	Libyan Arab Jamahiriya	Spain
Costa Rica	Luxembourg	Sudan
Côte d'Ivoire	Malawi	Suriname
Cuba	Maldives	Swaziland
Czechoslovakia	Mali	Syrian Arab Republic
Democratic Kampuchea	Malta	Thailand
Democratic Yemen	Marshall Islands	Togo
Djibouti	Mauritania	Tonga
Dominican Republic	Mauritius	Tunisia
Ecuador	Mexico	Turkey
El Salvador	Monaco	Uganda
Equatorial Guinea	Mozambique	Venezuela
Ethiopia	Nauru	Viet Nam
Fiji	Nepal	Yemen
Gabon	Nicaragua	Zaire
Gambia		
Ghana		

4. Summary of differences

Paragraph	Difference notified by	Paragraph	Difference notified by
Chapter 1	France United Kingdom	4.7.14	Canada Germany, Federal Republic of
2.3.1	France	4.8.2	Canada New Zealand Papua New Guinea
3.4.2 g)	Canada	4.9.3	USSR Vanuatu
3.4.2 h)	United States	4.9.4	Canada
3.5.2 c)	Canada	4.11.3	France
4.1.7	New Zealand	4.12.1	Democratic People's Republic of Korea
4.3.1	New Zealand	4.13.1	Canada
4.3.3	Argentina Australia New Zealand	4.13.3	Argentina Canada New Zealand
4.3.3 a)	Papua New Guinea USSR United States	4.14.2	United States New Zealand
4.3.3 b)	Papua New Guinea USSR United States	4.14.2 a)	USSR
4.3.3 c)	USSR United States	4.14.5	Canada
4.3.3 d)	Papua New Guinea United States	4.15	United States
4.3.3 e)	Papua New Guinea United Arab Emirates United States	5.7.1	Finland New Zealand United Kingdom
4.3.3 f)	United States	5.9.1	Bangladesh
4.3.3 g)	Papua New Guinea United States	6.2.8	New Zealand USSR
4.3.3 g) 2)	Bangladesh	6.2.10	Canada
4.5.3	Argentina	6.2.12	Canada
4.5.4	Argentina United States	6.3.1	Argentina Canada
4.5.5	Canada	6.3.6	New Zealand
4.5.5 a)	USSR	6.3.8	Australia USSR
4.5.6	USSR	6.3.9	Australia New Zealand
4.5.7	Germany, Federal Republic of	6.3.10	New Zealand
4.5.8	Canada USSR	6.3.11	Australia New Zealand
4.7	Barbados New Zealand Trinidad and Tobago Vanuatu Zambia	6.3.12	USSR
4.7.5	USSR	6.4.1	Argentina United Kingdom
4.7.8 a)	Denmark Germany, Federal Republic of	6.5.7	New Zealand
4.7.8 b)	Denmark Germany, Federal Republic of	7.1.1	New Zealand
4.7.10	Canada	7.1.1 b)	Denmark Norway Sweden
		7.2.1 a)	Germany, Federal Republic of
		7.3.1	Finland Norway Sweden



Paragraph	Difference notified by	Paragraph	Difference notified by
7.4	Argentina	9.3.8 h)	United Kingdom
	Canada	9.3.8 i)	United Kingdom
7.4.1	Denmark	9.4	Barbados
	Sweden	9.4.4 d)	Madagascar
7.4.2	Saudi Arabia		Malaysia
		9.4.13	Sweden
8.2.3	Canada	9.5.1	Bangladesh
8.4	Saudi Arabia	9.7.1	Sweden
9.1.4	Sweden	11.4.5	Australia
9.3.8 e)	United Kingdom		Canada



chapter 4

- 4.3.3\* The cloud and visibility criteria are determined in accordance with the meteorological minima established by the aeronautical authority for each aerodrome.
- 4.5.3\* In landing and take-off messages representative wind observations along the runway are not provided.
- 4.5.4 At some airports the surface wind indicators located in the ATS units are not connected to the same sensor as the meteorological station.
- 4.13.3 The term CAVOK is not used in METAR/SPECI messages.

chapter 6

- 6.3.1 Trend-type landing forecasts are provided on a regular basis at Ezeiza Airport and on request at the other international airports.
- 6.4.1 Forecasts for take-off are provided only on request.

chapter 7

- 7.4\* Wind shear warnings are not issued.



Chapter 4

- 4.3.3\*           The Australian practice for the issue of special weather reports is to relate cloud and visibility criteria to State-prescribed weather minima, hence ensuring that reports have uniform operational significance from aerodrome to aerodrome.

Chapter 6

- 6.3.8           Criteria used for cloud and visibility in trend-type forecasts differ  
6.3.9           from ICAO published criteria. Landing forecasts in Australia have  
6.3.11          been replaced by trend-type forecasts valid for 3 hours and updated  
                at half-hourly intervals. A TAF is superseded by trend-type  
                forecasts for the 3-hourly period of the trend-type forecast.

Chapter 11

- 11.4.5\*        Aerodrome forecasts are only provided for locations where trend-type forecasts are not issued. Aerodrome forecasts included in Australian VOLMET broadcasts have a period of validity of 12 hours. The forecasts are issued every 6 hours but are amended as necessary at any time.
-



Chapter 4

4.3.3\* g) 2) Not in use in this office.

Chapter 5

5.9.1 AIREP messages are not regularly received from flight crew members.

Chapter 9

9.5.1 Prognostic charts for upper wind and upper-air temperature are not prepared and supplied to flight crew members.

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\* Recommended Practice





hapter 4

- 4.7\* Barbados never has a visibility reduction necessitating the issue of RVR and it is therefore not measured.

hapter 9

- 9.4\* The documents referred to are not issued to flight crews except by specific requests either on filing or in accordance with 2.3.3 of Annex 3.
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Chapter 3

- 3.4.2 g)  
3.5.2 c)
- The exchange of OPMET information between meteorological offices and the supply of such information to ATS units and operators is accomplished by means of a meteorological communications system organized on a national basis and this function is not normally assigned to individual meteorological offices.

Chapter 4

- 4.5.5\* Surface wind observations in reports disseminated beyond the aerodrome are averaged over 2 minutes.\*\*
- 4.5.8\* For aviation weather reports distributed in Canada from Canada to the United States, wind speed is reported in knots, but the units are not specified in the observations.
- 4.7.10\* Rather than representing the lower step in the scale, the reported RVR is the median point of the increment. For example, the reading "12" indicates the RVR lies between 1 100 and 1 299 ft.
- 4.7.14\* RVR observations are not included in reports disseminated beyond the aerodrome.\*\*
- 4.8.2\*  
4.14.5 Abbreviations for present weather differ from those recommended. The term fog is used for both mist and fog in reports, aerodrome forecasts, VOLMET broadcasts and air-ground communications.\*\*
- 4.9.4\* Cloud amount is given as clear - no cloud, scattered - 1/8 to 4/8, broken - 5/8 to 7/8 and overcast - 8/8.
- 4.13.1\* The order of elements differs from that recommended and used in METAR, SPECI and TAF code forms.\*\*
- 4.13.3 The term CAVOK is used.\*\*

Chapter 6

- 6.2.10\* Aerodrome forecasts in TAF code are divided into part-periods. The group GGHR is used to indicate the time of significant change followed by a complete forecast. The terms GRADU and RAPID are not used.
- 6.2.12\* Abbreviations for present weather differ from those recommended. The term fog is used for both mist and fog in reports, aerodrome forecasts, VOLMET broadcasts and air-ground communications. The order of elements differs from that recommended and used in METAR, SPECI and TAF code forms.\*\*
- 6.3.1 Landing forecasts are not issued. Regular aerodrome forecasts are used for this purpose.

\* Recommended Practice

\*\* This notification applies to reports exchanged in Canada and between Canada and the United States in abbreviated plain language only.

Chapter 7

7.4\*

Due to the fact that wind shear observations cannot currently be made satisfactorily from the ground, Canada does not issue wind shear warnings on a routine basis.

Chapter 8

8.2.3\*

Aerodrome climatological tables and summaries concerning RVR are not available.

Chapter 11

11.4.5\*

Aerodrome forecasts in VOLMET broadcasts are extracted from regular forecasts issued at 6-hour intervals and valid for 24 hours. Special forecasts are not issued for this purpose.

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\* Recommended Practice

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Chapter 4

4.12.1\*

Observations made at aerodromes do not include the information concerning severe turbulence and wind shear.

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\* Recommended Practice



Chapter 4

- 4.7.8\* a), b) Runway visual range is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.

Chapter 7

- 7.1.1 b) SIGMET information including the occurrence and/or expected occurrence of specified en-route weather phenomena at transonic levels and supersonic cruising levels is not issued.
- 7.4.1\* Information about wind shear observed on the approach and/or take-off paths is included in reports for arriving and/or departing aircraft. Warnings on the expected existence of wind shear which could adversely affect aircraft during the climb-out and/or approach phases of flight are prepared only for aerodromes where a meteorological office is established and only within the operational hours of the office.
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\* Recommended Practice





Chapter 5

- 5.7.1 Aircraft meteorological observations are recorded in plain language.  
A copy of the AIREP is not included with the flight documentation.  
Aircraft meteorological observations are available for the flight  
crew by identification WXREP.

Chapter 7

- 7.3.1 Aerodrome warnings are not issued.
-



Chapter 1

Consultation            A consultation can be provided only by a meteorologist.

Chapter 2

2.3.1                    The amount of advance notice required is determined by the Meteorological Authority in accordance with the requirements to be satisfied and does not depend on an agreement with the operator.

Chapter 4

4.11.3\*                 For instrument runways, the thresholds of which are 5 m (16 ft) or more below the aerodrome elevation, and for precision approach runways, the QFE, if required, will refer to the relevant threshold elevation.

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\* Recommended Practice



chapter 4

- 4.5.7\* Multiple sensors for wind observations are not yet monitored by automatic equipment at all airports.
- 4.7.8\* a), b) The runway visual range is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.
- 4.7.14\*

chapter 7

- 7.2.1 a) The Federal Republic of Germany does not identify all SIGMET messages by the location indicator of the ATS unit serving the flight information region. In those cases where the airspace is divided into a flight information region (FIR) and an upper flight information region (UIR) and when the SIGMET refers to the upper flight information region only, the SIGMET will be identified by the location indicator of the ATS unit servicing the UIR.



Chapter 9

9.4.4\* d) Continue to use ICAO location indicators.

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\* Recommended Practice

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Chapter 9

9.4.4\* d)

Major aerodromes will continue to be identified by their ICAO location indicators.

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\* Recommended Practice

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Chapter 4

- 4.1.7\* and 4.7\* RVR is not observed.
- 4.3.1 Reports of routine observations are identified as SPECI reports when the observed conditions meet the criteria used for special observations.
- 4.3.3\* The criteria used for special observations differ slightly from those recommended by ICAO.
- 4.8.2\* With regard to METAR and SPECI reports, in addition to the code figures and abbreviations listed, code figures 00 to 03, 09, 13 to 16, 28, 76 and 78 will be used. They will not have letter abbreviations. They will have the same meanings as the corresponding code figures in code table 4677, World Meteorological Organization (WMO) Publication 306, Manual on Codes, Volume 1.
- 4.13.3 The term CAVOK is not used.
- 4.14.2 With regard to METAR and SPECI reports, when the horizontal visibility is 10 km or more, it will be coded in whole kilometres followed immediately by the letters "KM", e.g. 15KM.

Chapter 5

- 5.7.1 Forms for special air-report for volcanic activity will not be available.

Chapter 6

- 6.2.8 The TAF forecasts contain slightly more information than specified in WMO Publication 306, Manual on Codes, Volume 1.
- With regard to TAF forecasts, when the horizontal visibility is expected to be 10 km or more, it will be coded in whole kilometres followed immediately by the letters "KM", e.g. 15KM.
- The term CAVOK is not used in TAF forecasts.
- 6.3.6 The change indicator TEND is not used.
- 6.3.9 The trend part of the trend-type landing forecast indicates a change when the horizontal visibility is expected to change to, or pass, one of the following values:
- 800 m, 1 500 m, 3 000 m, 5 000 m or 8 km.

- 6.3.10 The trend part of the trend-type landing forecast indicates a change when the onset or cessation of a thunderstorm, freezing precipitation or fog is expected.
- 6.3.11 The trend part of the trend-type landing forecast indicates a change when the height of the base of cloud covering more than 4 oktas is expected to change to, or pass, one of the following values:  
200 ft, 500 ft, 1 000 ft or 1 500 ft.
- 6.5.7 Route forecasts are normally issued in a self-evident plain language form, but, on request, these will be issued in the ROFOR code form specified in WMO Publication 306, Manual on Codes, Volume 1.

## Chapter 7

- 7.1.1 SIGMETs on volcanic ash clouds shall be issued only when they are known to exist. The SIGMETs should include an indicator of future movement where possible.
-

Chapter 7

- 7.1.1 b) SIGMET information, including the occurrence and/or expected occurrence of moderate or severe turbulence, cumulonimbus clouds and hail at transonic levels and supersonic cruising levels will not be issued.
- 7.3.1 Aerodrome warnings in plain language will normally not be issued for Norwegian aerodromes.
-



apter 4

- 4.3.3\* a), b) Mean speed before and/or after change - 15 kt.
- 4.3.3\* d), e), g) Cloud and visibility criteria are related to prescribed weather minima.
- 4.8.2\* The following abbreviations are not used in plain language meteorological messages: PO, SA, GR, FU, SQ.
- Where the relevant phenomena are reported, full plain language is used.
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Chapter 7

7.4.2\* Wind shear warnings are not issued on a routine basis.

Chapter 8

8.4\* Aeronautical descriptive climatological memoranda are not available at present.

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\* Recommended Practice



Chapter 7

- 7.1.1 b) SIGMET information is not issued for moderate or severe turbulence, cumulonimbus or hail at transonic levels and supersonic cruising levels.
- 7.3.1 Aerodrome warnings will normally not be issued for meteorological conditions which could adversely affect aircraft on the ground, including parked aircraft.
- 7.4.1\* Information on wind shear observed on the approach and the take-off path is included in reports for arriving and departing aircraft. Due to limited capacities for maintaining a continuous survey of wind shear conditions, wind shear warnings are not issued.

Chapter 9

- 9.1.4 Meteorological information supplied to operators and flight crew  
9.7.1 members will not always include forecasts for the aerodrome of departure and the aerodrome of intended landing in Sweden. Forecasts for Swedish aerodromes will be issued as indicated in AIP-Sweden.
- 9.4.13 A copy of the written or printed documentation supplied to flight crew members will normally not be retained for individual flights. The information available for inquiries will be copies of charts and specified forms that may have been included in the documentation.
-



Chapter 4

4.7\*

No RVR installations exist.

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\* Recommended Practice



Chapter 4

- 4.3.3\* a), b), c) The wind speed is given in metres per second.  
4.5.8\*
- 4.5.5\* a) The averaging period for wind observations is 2 minutes.  
4.5.6
- 4.7.5\* RVR observations are made, and RVR is reported, when the horizontal visibility is 2 000 m or less.
- 4.9.3\* The height of the base of cloud is always reported above the runway threshold elevation.
- 4.14.2 a) In the METAR and SPECI code forms wind speed is indicated in metric units.

Chapter 6

- 6.2.8 In the TAF and ROFOR code forms wind speed is reported in metric units.
- 6.3.8 The wind speed is given in metric units.  
6.3.12
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Chapter 4

4.3.3\* e) Not being disseminated beyond the aerodrome of origin.

\* Recommended Practice



Chapter 1

Definitions Consultation: Is provided only by a meteorological forecaster.

Chapter 5

5.7.1 Special air report of volcanic activity forms are not provided in the United Kingdom.

Chapter 6

6.4.1 Forecasts for take-off are available on request only.

Chapter 9

9.3.8 e), h), i) Not displayed.

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Chapter 3

- 3.4.2 h) The United States relies mainly on information derived from satellite and aircraft observations.

Chapter 4

- 4.3.3\* a), b), c) Practices require special observations due to changes in surface winds only when:
- a) the average 1-minute wind speed suddenly increases to twice or more than twice the currently reported 1-minute wind speed and exceeds 25 kt; or
  - b) the wind shifts (a term applied to a change in wind direction of 45° or more which takes place in less than 15 minutes).
- In addition, United States' practices are to report any observation of wind variation when the wind direction varies by more than 60° and wind speed is more than 6 kt.
- 4.3.3\* d) Practices require special observations to be taken due to changes in visibility when prevailing visibility as reported in the body of the report decreases to less than, or if below, increases to equal or exceed:
- a) 3 miles;
  - b) 2 miles;
  - c) 1½ miles;
  - d) 1 mile; or
  - e) all nationally published landing minimums applicable to the airport.
- 4.3.3\* e) Practices require special observations due to changes in RVR when the highest value from the designated RVR runway during the preceding 10 minutes decreases to less than, or if below, increases to equal or exceed 2 400 ft.
- 4.3.3\* f) Practices do not require special observations for the beginning, ending or change in intensity of:
- a) a mixture of rain and snow;
  - b) drifting snow;
  - c) duststorm; or
  - d) sandstorm.

\* Recommended Practice

- 4.3.3\* g) Practices are to take special observations when the ceiling forms or dissipates below, decreases to less than, or if below, increases to equal or exceed:
- a) 3 000 ft;
  - b) 1 500 ft;
  - c) 1 000 ft;
  - d) 500 ft; or
  - e) all nationally published landing minimums applicable to the airport.
- (Ceiling is defined as the height ascribed to the lowest opaque layer aloft covering 6/10 or more of the sky, or the vertical visibility in a surface-based layer of obscuring phenomena.) Special observations are also required when a layer of clouds or obscuring phenomena aloft is present below 1 000 ft, or present below the highest published landing minimum applicable to the airport, and no such layer aloft was reported in the previous observation.
- 4.5.4 Surface wind indicators from all sensors are not located in meteorological offices at aerodromes where such offices are located.
- 4.13.3 The United States does not use the term CAVOK in the meteorological reports it prepares.
- 4.15\* The United States relies mainly on information derived from satellite and aircraft observations.
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Chapter 4

4.7\* RVR is not measured.

4.9.3\* Cloud observation is of the aerodrome and local vicinity.

\* Recommended Practice





apter 4

4.7\*

Runway visual range observations are not provided at present.

